Parallel Computational Fluid Dynamics 2008 Lecture Notes in Computational Science and Engineering,

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Abstract: This book collects the proceedings of the Parallel Computational Fluid Dynamics 2008 conference held in Lyon, France. Contributed papers by over 40 researchers representing the state of the art in parallel CFD and architecture from Asia, Europe, and North America examine major developments in (1) block-structured grid and boundary methods to simulate flows over moving bodies, (2) specific methods for optimization in Aerodynamics Design, (3) innovative parallel algorithms and numerical solvers, such as scalable algebraic multilevel preconditioners and the acceleration of iterative solutions, (4) software frameworks and component architectures for parallelism, (5) large scale computing and parallel efficiencies in the industrial context, (6) lattice Boltzmann and SPH methods, and (7) applications in the environment, biofluids, and nuclear engineering.

Keywords: computational fluid dynamics - computer science - numerical analysis - parallel computation

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**Computational Fluid Dynamics** by Hyyoung Wooh Oh. Publisher: InTech 2010 ISBN-13: 9789537619596 Number of pages: 428. Description: This book is intended to serve as a reference text for advanced scientists and research engineers to solve a variety of fluid flow problems using computational fluid dynamics (CFD). Lecture notes in fluid mechanics. From basics to the millennium problem by Laurent Schoeffel - arXiv These lecture notes have been prepared as a first course in fluid mechanics up to the presentation of the millennium problem listed by the Clay Mathematical Institute. Our primary goal is to debunk this beautiful problem as much as possible. (7326 views). April 2011 · Lecture Notes in Computational Science and Engineering. Toan Pham. Tromeur-Dervout Damien. We investigate the proper orthogonal decomposition (POD) as a powerful tool in decoupling dynamical systems suitable for parallel computing. The proceedings from Parallel CFD 2005 covering all aspects of the theory and applications of parallel computational fluid dynamics from the traditional to the more contemporary issues. - Report on current research in the field in an area which is rapidly changing - Subject is important to all interested in solving large fluid dynamics problems - Interdisciplinary activity. Contributions include [Show full abstract] scientists with a variety of backgrounds.